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(19) **United States**(12) **Patent Application Publication****Kis et al.**(10) **Pub. No.: US 2014/0321583 A1**(43) **Pub. Date: Oct. 30, 2014**(54) **APPARATUS AND ASSOCIATED METHODS  
FOR SWITCHING BETWEEN ANTENNAS IN  
A MULTI-ANTENNA RECEIVER**(52) **U.S. Cl.**CPC ..... **H04B 7/082** (2013.01); **H04B 7/2662**  
(2013.01)USPC ..... **375/340**; **375/316**(75) Inventors: **Levente Robert Kis**, Godollo (HU);  
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(57)

**ABSTRACT**

Described herein are one or more apparatus, that at least partially synchronise with a first radio-frequency signal from a first antenna element, of an array of spatially distributed antenna elements in a multi-antenna array receiver, to determine the position of at least one of a repeated guard interval in the first radio-frequency signal from the first antenna element, the repeat occurring at a particular defined characteristic interval. The apparatus then use the determined position of the at least one guard interval in the first radio-frequency signal to switch to a second radio-frequency signal from a second antenna element, of the array of spatially distributed antenna elements in a multi-antenna receiver, and further determine a relative orientation of the multi-antenna receiver from a transmitter of the radio-frequency signals using characteristics determined for the first and second radio-frequency signals following the at least respective partial synchronisations.

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